

## High Performance 12/16 watt Ku-Band Split BUCs

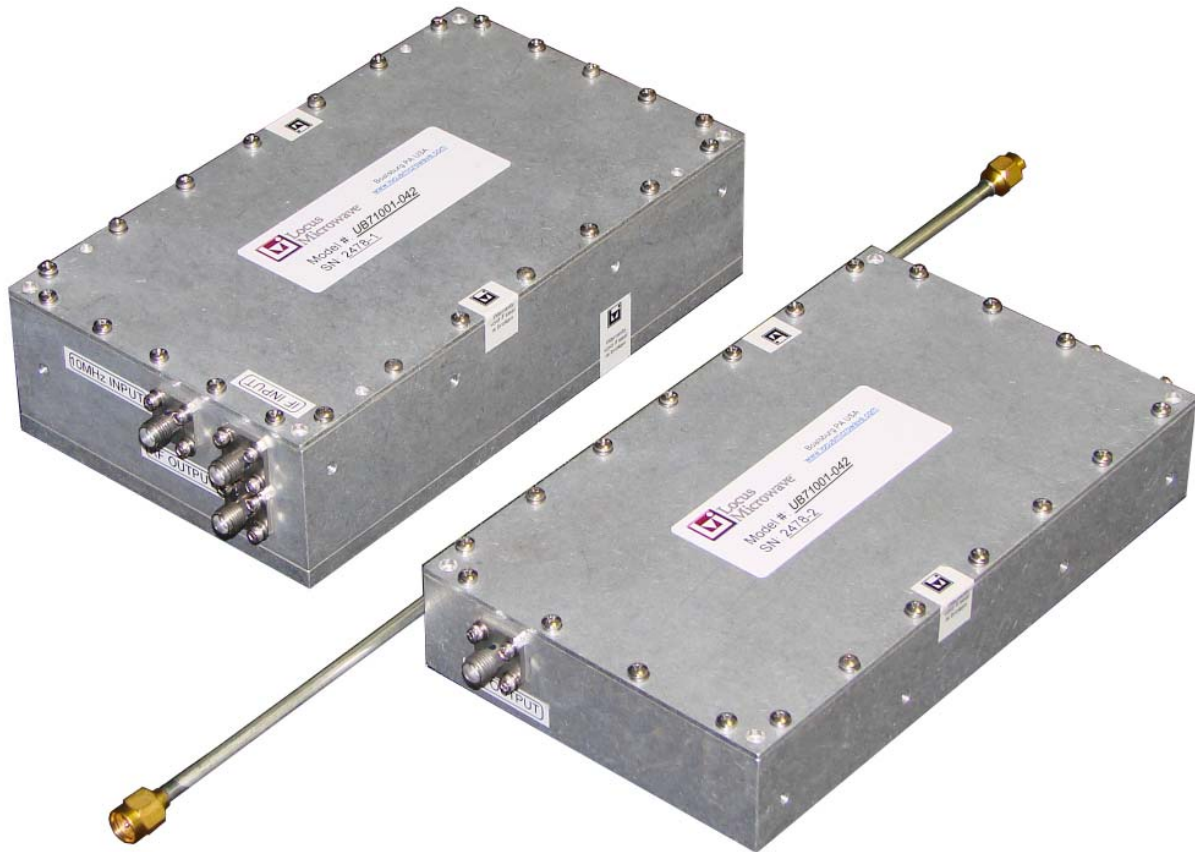
### General Information

Intended for Manpack applications, Locus Microwave, Inc.'s UB71x01 Block Upconverters are designed for use in commercial, military and military Manpack miniature satcom systems. This compact split unit can be mounted for maximum efficiency of operation in a customer supplied package with provision for adequate heatsinking.

### Features:

- Split configuration
- 14.0-14.5 or 13.75-14.5 GHz Coverage
- Light Weight (~3.5 pounds)
- Planar SSPA Package
- MIL-STD-188-164A Phase Noise
- 12/16 watt Output Power choices
- Separate 10 MHz input
- Internal image filtering included
- Integral Monitor/Alarm

### Typical Configuration





Locus

Microwave™ Split Ku Band Block Upconverters

UB71x01-041/-042

	Range	Units	Notes
<b>Electrical Specifications</b>			
Input Frequency	950-1450	MHz	
Output Frequency (UB71001-041/-042)	14.0-14.5	GHz	13.75-14.50 GHz optional
Local Oscillator Frequency	13.05	GHz	12.8 GHz w/13.75-14.5 GHz option
External Reference			
Frequency	10	MHz	
Level	0 dBm +/-5 dB		
Phase Noise (SSB)			per MIL-STD-188-164A
@ 1 kHz offset	-72 max., -74 typ.	dBc/Hz	
@ 10 kHz offset	-82 max., -86 typ.	dBc/Hz	
@ 100 kHz offset	-92 max., -99 typ.	dBc/Hz	
Gain	53 min., 57 typ.	dB	consult factory for other gain levels
Gain Flatness	+/-1.25 max.	dB	per full band
Gain Slope	+/-0.4 max.	dB	per 40 MHz
Stability over temperature	+/- 2.0	dB	
P <sub>1dB</sub> (-041/-042)	+40.0/+41.0 min.	dBm	derate 0.5 dB for 13.75-14.50 GHz
P <sub>sat</sub> (-041/-042)	+41.0/+42.0 typ.	dBm	
Third Order Intermodulation Distortion	-25 max.	dB	@ 3 dB backoff relative to rated P <sub>1dB</sub>
Noise Figure	12 nom.	dB	
Input VSWR	1.70 typ., 2.00 max.	:1	
Output VSWR	1.25 typ., 1.40 max.	:1	Isolator Included
Overdrive	+0 max.	dBm	non-damaging
Spurious, Signal Related (@ rated output)	-60 max.	dBc	within rated output band
Spurious, Signal Independent (@ rated output)	-60 max.	dBc	outside of band
M&C Function (optional)	Mute, Temp. Monitor, Fault		optional
Power Requirement			
Input Voltage	+12.0 nom.	vdc	
Input Current (-041/-042)	8.5/9.5 nom.	amps	
<b>Mechanical Specifications</b>			
Size, SSPA Module	6.00 x 3.50 x 1.06	inches	L x W x H
Size, BUC Module	6.00 x 3.50 x 1.55	inches	L x W x H
Weight	3.5 nom.	lbs.	
Finish	passivated aluminum		
Connectors			
IF Input/ RF Output	Type SMA	Female	SSPA & Converter Modules
+12 VDC Input, M&C I/O	DB 9-F		
External Reference Input	Type SMA	Female	
<b>Environmental</b>			
Operating Case Temperature	-40 to +60	°C	Heatsink & forced air cooling required
Humidity	100	%	with condensation

Specifications are subject to change at the discretion of Locus Microwave, Inc.

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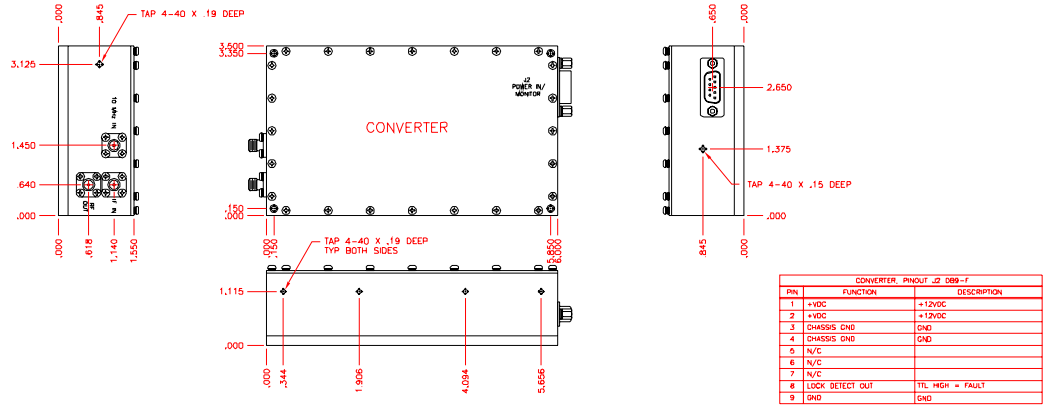
[www.locusmicrowave.com](http://www.locusmicrowave.com)



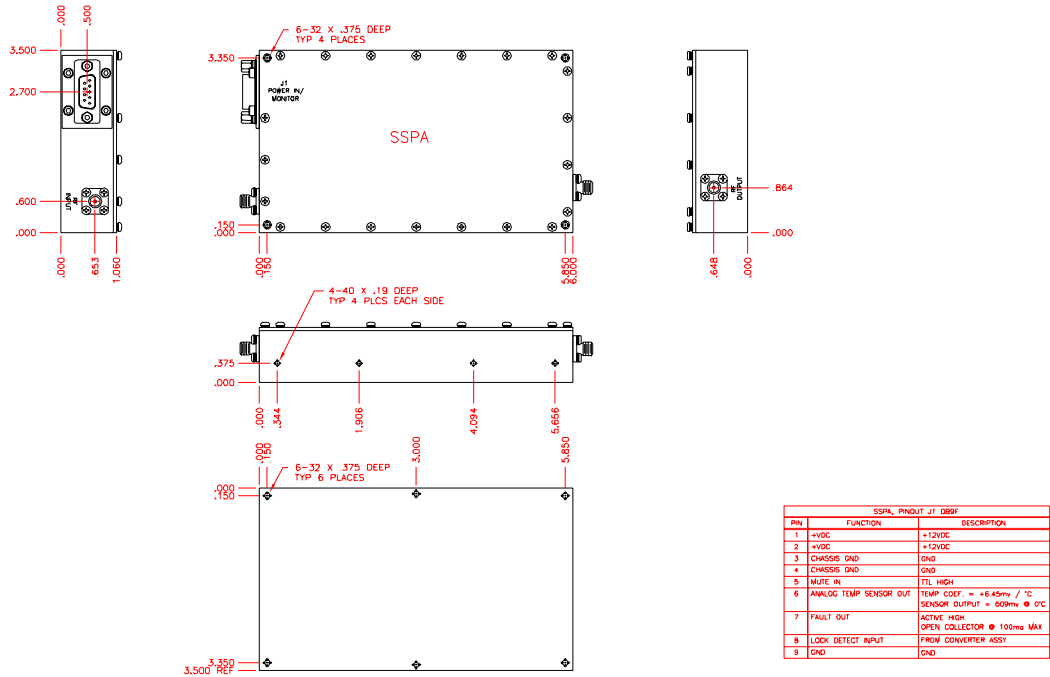
# Locus Microwave™ Split Ku Band Block Upconverters

UB71x01-041/-042

## Outline Drawing, BUC Module



## Outline Drawing, SSPA Module



## Block Diagram

